District 10 Mobility Performance Report

2018 Fourth Quarter

DEPARTMENT OF TRANSPORTATION

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District 10 Mobility Performance Report

2018 Fourth Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 10 contains eight counties located within the Central Valley (San Joaquin / Stanislaus / Merced) and the Sierra Nevada (Amador / Calaveras / Tuolumne / Mariposa / Alpine). Over the years detection in Alpine and Calaveras Counties has been sparse, so the District 10 Mobility Performance Report (MPR) no longer includes these two counties in the quarterly or annual analysis.

The MPR quarterly analysis compares information in the current quarter to that of the previous quarter and the quarter one year prior. The following are the performance measures reported in the MPR:

- Vehicle Miles Traveled (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- Detector Health (DH)

This information is based on data collected every day of the quarter, twenty–four hours a day, by automated vehicle detector stations deployed on urban-area freeways where congestion is regularly experienced. The MPR presents congestion information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at 60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In the fourth quarter, total delay equaled 517 thousand vehicle hours of delay (VHD) at the 35mph speed threshold and 1.5 million VHD at the 60mph threshold. Compared to the same quarter the

year before, there was a 243.2 percent increase in 35 mph quarterly delay and 159.7 percent increase in 60mph quarterly delay. The average weekday delay experienced in this quarter was approximately 7,024 VHD at 35mph and 21,144 VHD at 60mph. The increased delay numbers can mainly be attributed to a 34 percent increase in the number of good detectors and -28 percent decrease in the number of bad detectors compared to the previous quarter of 2018.

The following District 10 projects are currently being constructed or are scheduled for construction effective January 2018. These current and future (planned) projects will further relieve congestion in District 10:

MERCED COUNTY

MER 99 NB LIVINGSTON MEDIAN WIDENING; EA 10-0Q121
Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 08/01/2021
End Project – 10/02/2023

MER 99 SB LIVINGSTON MEDIAN WIDENING; EA 10-0Q122
Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 01/19/2019
End Project – 10/01/2021

MER 152 – LOS BANOS BYPASS SEGMENT I; EA 10-41911
Convert 4 lane expressway to 6 lane freeway
Approve Construction Contract Date – 05/15/2018
End Project – 10/01/2020

SAN JOAQUIN COUNTY

SJ 4 RAMP METERING IMPROVEMENTS; EA 10-1F180
Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040
Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

I-205 SMART CORRIDOR PHASE 2; EA 10-1C330
Install ramp meters and ITS elements along I205 from MacArthur to Grant Line Road
Currently in PA&ED
End Project – 11/01/202

I-205 – MOUNTAIN HOUSE PARKWAY INTERCHANGE PROJECT; EA 10-1E210
Improve the I-205 – Mountain House Parkway Interchange to accommodate planned future growth in and around the City of Tracy
Currently in PA&ED
End Project – Estimated mid 2022

I-580 – PATTERSON PASS ROAD INTERCHANGE PROJECT; EA 10-1E220
Improve the I-205 – Patterson Pass Road Interchange to accommodate planned future growth in and around the City of Tracy
Currently in PA&ED
End Project – Estimated mid 2022

I-205 – LAMMERS ROAD / 11TH STREET INTERCHANGE PROJECT; EA 10-0H910
Construct the I-205 – Lammers Road / 11th Street Interchange to accommodate planned future growth in and around the City of Tracy
Currently in PA&ED
End Project – Estimated mid 2022

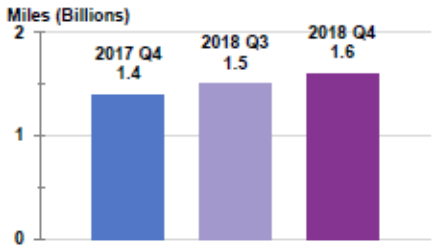
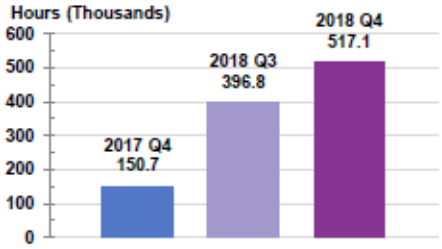
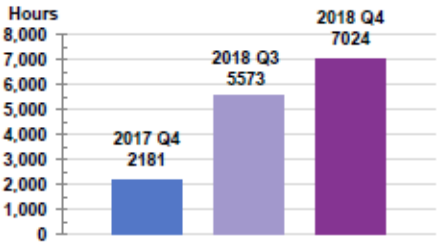
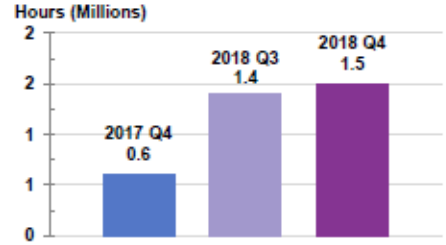
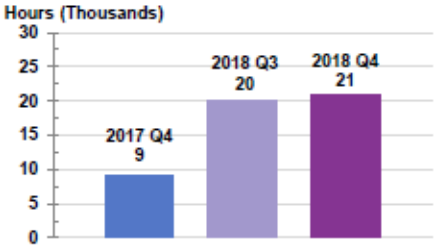
STANISLAUS COUNTY
STA 99 / SJ 99 RAMP METERING & MAINLINE IMPROVEMENTS; EA 10-1C300
Improve Mainline and Ramp Operations; Standardize Structure Clearance; Add Auxiliary Lane
Currently in PA&ED
End Project – Estimated to be mid 2020

The above capacity increasing, ramp metering, interchange improvement, and interchange construction projects are located on the routes that experienced the most congestion in District 10. These projects will eventually help to alleviate the congestion and delay as the population and travel demand in District 10 grows over next 10 years.

The next section of this report summarizes the District 10 2018 fourth quarter Mobility Statistics.

2018 Q4 Quarterly Mobility Statistics – District 10

Data may change in coming months due to on-going data reconciliation process

Measure	Graph	Percentage Change	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)		13%	3.3%
Total Vehicle Hours of Delay (VHD) at 35 mph		243.2%	30.3%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		222.1%	26%
Total Vehicle Hours of Delay (VHD) at 60 mph		159.7%	9%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		148.5%	7.5%

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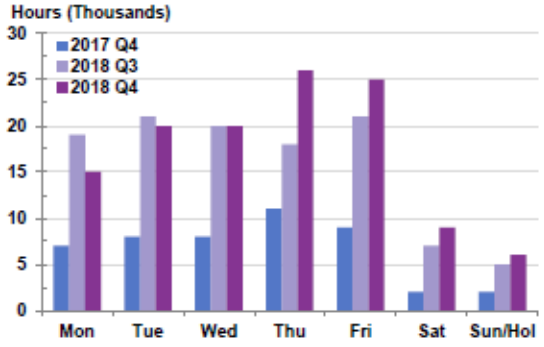
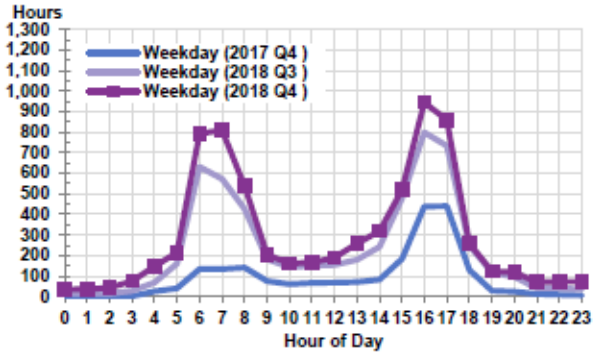
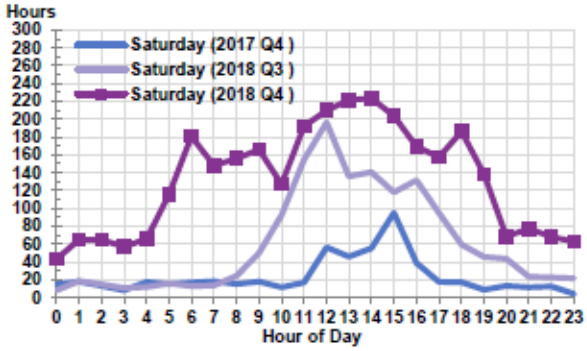
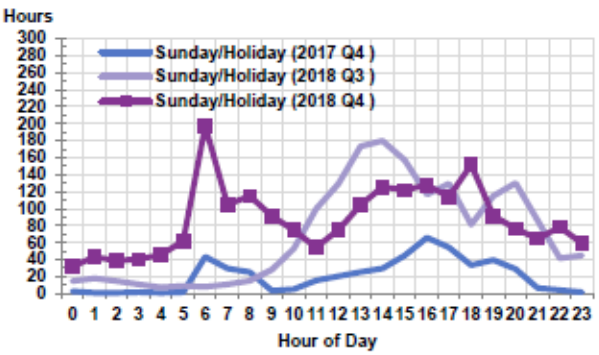
Measure	Graph	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter	Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
Average Vehicle Hours of Delay by Day of Week at 60 mph		–	Monday -19.6%	Friday 161.8%	Thursday 45.3%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		–	–	7 AM 502.5%	7 AM 41.3%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		–	–	1 PM 383.1%	6 AM 1313%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		–	1 PM -39.8%	6 AM 356.4%	6 AM 2432.4%

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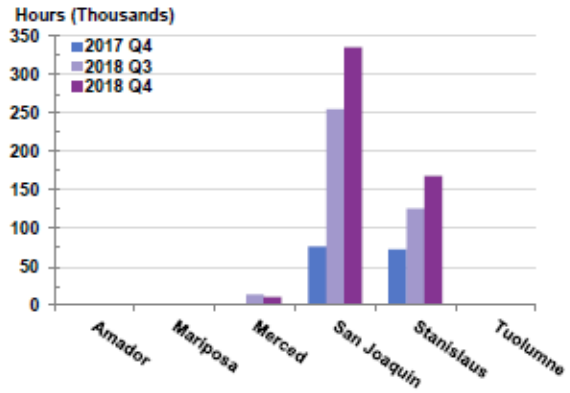
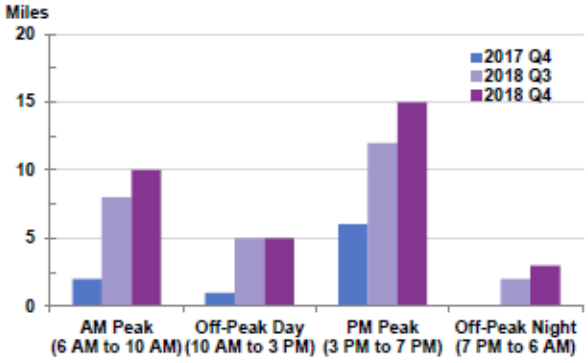
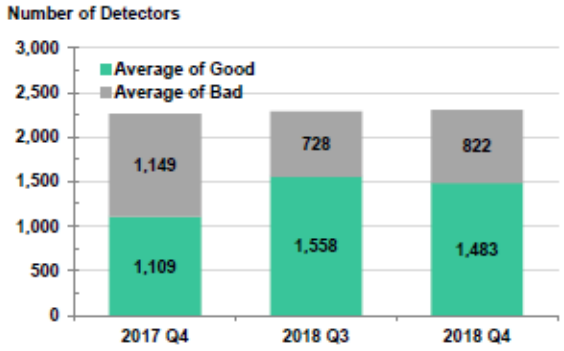
Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago –	Largest Magnitude Decrease over last quarter Merced -18.8%
		Largest Magnitude Increase over one year ago San Joaquin 338.8%	Largest Magnitude Increase over last quarter San Joaquin 31.6%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago –	Largest Magnitude Decrease over last quarter –
		Largest Magnitude Increase over one year ago PM Peak 166.3%	Largest Magnitude Increase over last quarter PM Peak 26.1%
Average Number of Good and Bad Detectors		Change in Good over one year ago 34%	Change in Good over last quarter -5%
		Change in Bad over one year ago -28%	Change in Bad over last quarter 13%

Data may change in coming months due to on-going data reconciliation process

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2018 Q4-2017 Q4		Difference 2018 Q4-2018 Q3		Rank		
Route	County	2017 Q4	2018 Q3	2018 Q4	Absolute	Percentage	Absolute	Percentage	2017 Q4	2018 Q3	2018 Q4
I205	San Joaquin	154421.4	299410.2	318808.3	164386.9	106%	19,398	6%	1	1	1
I5	Merced	0	36.8	2889.5	2889.5		2,853	7752%		18	12
I5	San Joaquin	7653.6	46887.5	54428.9	46775.3	611%	7,541	16%	6	4	3
I5	Stanislaus	0	12083.4	11009.6	11009.6		(1,074)	-9%		8	8
I580	San Joaquin	14743.4	18541.5	41136.1	26392.7	179%	22,595	122%	5	7	5
SR104	Amador	0	0	0.7	0.7		1				21
SR108	Tuolumne	0	975.5	332.6	332.6		(643)	-66%		13	18
SR12	San Joaquin	0.2	0	1769.5	1769.3	884650%	1,770		12		14
SR120	San Joaquin	355	709.2	8379.1	8024.1	2260%	7,670	1081%	10	15	9
SR120	Tuolumne	0	0	955.4	955.4		955				15
SR132	San Joaquin	8.6	743.7	2821.7	2813.1	32710%	2,078	279%	11	14	13
SR132	Stanislaus	24394.2	23946.1	21443.6	-2950.6	-12%	(2,503)	-10%	4	6	7
SR152	Merced	0	6556.5	797.9	797.9		(5,759)	-88%		9	16
SR165	Merced	0	1631.7	138.2	138.2		(1,494)	-92%		12	19
SR219	Stanislaus	3258.4	5256	4798.8	1540.4	47%	(457)	-9%	7	11	11
SR4	San Joaquin	389.7	34517.8	26637	26247.3	6735%	(7,881)	-23%	9	5	6
SR49	Mariposa	0	538	587.2	587.2		49	9%		16	17
SR49	Tuolumne	0	0	0	0		-				
SR88	Amador	0	262.3	2.8	2.8		(260)	-99%		17	20
SR99	Merced	1618.7	5724.8	7505.4	5886.7	364%	1,781	31%	8	10	10
SR99	San Joaquin	42712.4	48745	43790	1077.6	3%	(4,955)	-10%	3	3	4
SR99	Stanislaus	44824.9	84460.4	130682.5	85857.6	192%	46,222	55%	2	2	2
TOTALS		294,381	591,026	678,915	384,534	130.6%	87,888	14.9%			